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STYLUS CONTROLLED SIGN WITH CONTACT GRID OF PARALLEL PLATES

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This invention pertains to electric writing boards, and more particularly to a panel to which erasable electro-conductive writing may be applied.

This invention is directed to certain improvements to apparatus covered in my Patent 3,019,425, issued January 30, 1962.

One of the objects of this invention is to provide an improved contact grid for electric writing boards which is compact and durable in use.

Another object is to construct a contact grid for an electric writing board having a smooth continuous contact surface adapted to writing directly thereon with electro-conductive material or to write on a separate sheet, to the under side of which electro-conductive is applied by the writing and then the sheet pressed against the grid for the lighting effect.

A further object is to provide an improved grid for an electric writing board having specially prepared contact areas lying within a continuous surface on which suitable electro-conductive lines may be traced with a pencil or stylus whereby a series of light bulbs connected to the grid from a remote location may be lit or energized to form a configuration corresponding to the material written on the board.

A further object is to provide an electric writing board of the described character wherein the scribed lines may be readily erased and removed from the contact surface of the writing contact grid of the device.

Further features and advantages of this invention will appear from a detailed description of the drawings in which:

FIG. 1 is a general perspective view of contact grid unit and electric writing board in actual use.

FIG. 2 is an enlarged fragmentary plan view of the contact grid unit indicated by the line 2—2 of FIG. 1

FIG. 3 is an enlarged fragmentary sectional view on the line 3—3 of FIG. 2.

As an example of one embodiment of this invention there is shown an electric writing board apparatus comprising the light box 10 in which are arranged the light bulbs 11 in a desired grid pattern. Each of the light bulbs 11 have one side connected to a common ground connection 12 and one side of an A.C. power supply plug 13 is similarly connected to the common ground 12.

A series of parallel contact plates 14 are placed together with their side faces 15 in abutting contact and placed in a suitable contact grid box 16 to form a flat writing surface 17 of the top surfaces of the plates 14. In the sides 15 of each of the plates 14 are formed vertically disposed slots 18 spaced longitudinally of the plates 14. The series of slots 18 on one side of each plate is staggered from the series of slots on the other side so that when all of the plates are sandwiched together in the grid box a grid of square openings are presented in the writing surface corresponding to the grid arrangement of the light bulbs 11 in the light box 10.

The slots 18 are of such size that the insulative sheath 19 on the individual light bulb leads 20 fits firmly and is rigidly secured in the plate slots 18. The upper ends of the insulative sheath is cut away at 21 leaving the upper ends 22 exposed up to the writing surface 17. The exposed ends 22 are thus held centered in the slots 18 and spaced from and not electrically contacting the plates 14. Suitable insulative plastic material is provided in the cavities around the ends 22 of the wires to

hold them rigidly in centered position in the slots and to provide a continuous uninterrupted writing surface having the upper ends of the wires 22 as one set of contacts surrounded by the checkerboard grid contact areas 23 formed by plates 14. The leads 20 are connected through suitable resistors 24, if required, to the other sides of the light bulbs 11 and the other side of the power supply plug is connected to the plates 14.

Thus, whenever any electro-conductive mark is made on the surface 17 interconnecting the contact ends 22 and the contact areas 23 corresponding lights in the light box 10 will be energized, reproducing the configuration presented on the surface 17 of the grid box. It is also contemplated that a suitably scribed sheet of paper with electro-conductive lines thereon can be placed on the surface 17 to reproduce the pattern in the light box 10.

While the apparatus herein disclosed and described constitutes a preferred form of the invention, it is also to be understood that the apparatus is capable of mechanical alteration without departing from the spirit of the invention and that such mechanical arrangement and commercial adaptation as fall within the scope of the appendant claims are intended to be included herein.

Having thus fully set forth and described this invention, what is claimed and desired to be obtained by United States Letters Patent is:

1. A contact grid box for an electric writing board comprising in combination:
   (*a*) series of parallel contact plates having transverse slots formed in the sides thereof placed in side abutting contact,
   (*b*) insulated wires having exposed ends fitted in and supported by their insulation in said slots,
   (*c*) and plastic insulative material in the ends of said slots surrounding said exposed ends of said wires to form a continuous writing surface grid consisting of the ends of said wires and the checkerboard grid contact areas of said plates formed by said ends of said slots.

2. A contact grid box for an electric writing board comprising in combination:
   (*a*) series of parallel contact plates having transverse slots formed in the sides thereof placed in side abutting contact,
   (*b*) insulated wires having exposed ends fitted in and supported on the peripheral surfaces of their insulation in said slots,
   (*c*) plastic insulative material in the ends of said slots surrounding said exposed ends of said wires to form a continuous writing surface grid consisting of the ends of said wires and the checkerboard grid contact areas of said plates formed by said ends of said slots,
   (*d*) a light box having a series of light bulbs,
   (*e*) a source of electrical power having one lead electrically connected to said plates and its other terminal connected to a common ground,
   (*f*) means for connecting one side of said light bulbs to said common ground,
   (*g*) and means connecting each other side of said light bulbs to an individual wire held in said slots of said plates.

3. A contact grid box for an electric writing board comprising in combination:
   (*a*) a series of parallel sided contact plates in abutting side contact having transverse slots formed in the sides thereof, said slots in each plate being longitudinally spaced, the slots being staggered on one side from the slots on the other side of each plate,
   (*b*) a series of insulated wires having their sheaths wedged and supported on the peripheral surface of their insulation in said slots and having a portion of